

Colonel Andrew M. Perkins, Jr.
U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096

Attn: Adrian Jennings
Regulatory Branch

Re: Permit Application 95-0374-50, Bavon
Beach Property Owners Association, Mathews County, Virginia

Dear Colonel Perkins:

The U.S. Fish and Wildlife Service (Service) has reviewed the Department of the Army (DOA) permit application 95-0374-50, submitted by the Bavon Beach Property Owners Association, c/o Frank Beveridge, to install a 136-foot long, six-inch diameter outflow pipe from an existing impoundment into the Chesapeake Bay in Mathews County, Virginia. Your April 26, 1995 request for formal consultation was received on May 2, 1995. This document represents the Service's biological opinion on the effects of that action on the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

I. CONSULTATION HISTORY

04-03-95 The Service received a request from the U.S. Army Corps of Engineers (Corps) to review the proposed project for potential impacts to Federally listed species.

04-20-95 The Service met with the Corps and the applicant on-site to discuss the project.

05-02-95 The Service received the Corps request to initiate formal consultation.

II. BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The applicant proposes to replace an existing 136-foot long, six-inch diameter discharge pipe from an existing stormwater management pond to the tidal waters of the Chesapeake Bay in Mathews County, Virginia (Figure 1). The existing iron pipe is buried approximately two feet below the grade of the beach. It has collapsed due to its age and exposure to salt water. The construction will require the excavation of a trench, installation of a new pipe, and backfilling the trench with the excavated material. The trench will be approximately one foot wide and will require a total construction width of five feet. The trench will be excavated using a "Bobcat" mounted with a small backhoe. The excavation will commence at the dune line and continue channelward for approximately 56 feet to mean high water and then another 80 feet to mean low water. A segmented pipe will be placed and connected in the excavated trench. During the site visit, the applicant stated that the work could be completed within three days. According to the applicant, the existing pipe will remain in place and the new pipe will be located adjacent to it.

RANGEWIDE STATUS OF THE NORTHEASTERN BEACH TIGER BEETLE

Northeastern beach tiger beetles are typically found on highly dynamic beaches with back beach vegetation and prefer long, wide beaches that have low human and vehicular activity, fine sand particle size, and a high degree of exposure (Knisley et al. 1987). The northeastern beach tiger beetle is a beach-dwelling beetle with white to light tan wing covers, often with fine, dark lines, and a bronze-green head and thorax, and measures 0.5 to 0.6 inches in length (U.S. Fish and Wildlife Service 1994). In the Chesapeake Bay region, adult tiger beetles, present on beaches from mid-June through August, forage along the water's edge on small amphipods, flies, and other beach arthropods or scavenge on dead amphipods, crabs, and fish (Knisley et al. 1987, U.S. Fish and Wildlife Service 1993). Mating and egg-laying occur from late June through August (U.S. Fish and Wildlife Service 1994). Larval tiger beetles dig 4- to 14-inch vertical burrows in the sand within and above the intertidal zone (Knisley et al. 1987, U.S. Fish and Wildlife Service 1993). Larvae pass through three developmental stages and emerge as adults two years following egg-laying (Knisley et al. 1987, U.S. Fish and Wildlife Service 1993). Adult tiger beetles have a regular dispersal phase after peak numbers emerge in early July (Knisley and Hill 1989, U.S. Fish and Wildlife Service 1993). Mark-recapture studies have documented that tiger beetles may travel five to twelve miles (Knisley and Hill 1989) from sites where they were marked, and some individuals may disperse tens of miles (U.S. Fish and Wildlife Service 1993).

The northeastern beach tiger beetle historically was a common inhabitant of coastal beaches from Cape Cod, Massachusetts to New Jersey and along Atlantic coast of the middle and northern states (U.S. Fish and Wildlife Service 1994). Except for one population on Martha's Vineyard, Massachusetts and a recently discovered population near Westport, Massachusetts, it is extirpated from the remainder of Massachusetts and all of Rhode Island, Connecticut, New York (Long Island), and New Jersey. Currently, there are 55 known tiger beetle sites in Virginia and 13 in Maryland (U.S. Fish and Wildlife Service 1994).

Threats to the northeastern beach tiger beetle include shoreline development, beach stabilization, high recreational use, off-road vehicular traffic, pollution, pesticides, and natural events, including winter beach erosion, flood tides, and hurricanes (Knisley et al. 1987, Knisley and Hill 1989, Knisley and Hill 1990, U.S. Fish and Wildlife Service 1993). Populations of northeastern beach tiger beetles are highly variable from year to year. This beetle is subject to local population extinctions but is capable of dispersal and recolonization (U.S. Fish and Wildlife Service 1993). The Service determined threatened status for this beetle because of its greatly reduced range and high susceptibility to natural and human threats (Federal Register, Vol. 55, No. 152, August 7, 1990).

ENVIRONMENTAL BASELINE

Status of the Species - There are eight known tiger beetle sites in Mathews County. Adult tiger beetles (539 individuals/300 linear meters) have been documented from the project location north, along a 0.6 kilometer stretch of beach (Buhlmann and Pague 1992). However, a larval beetle survey has not been undertaken. The beach at the project site is approximately 60-feet wide and two miles long with a vegetated back beach providing good habitat for both larval and adult tiger beetles.

Effects of the Action - This project may result in the direct killing of an undetermined number of adult and larval northeastern beach tiger beetles within the 5-foot wide, 136-foot long construction path (680 square feet) and within the area where the Bobcat is driven to access the construction site. Adult and larval tiger beetles present on the beach are likely to be crushed by placement of equipment and material on the beach. Existing habitat appropriate for adult and larval beetles within the construction area (680 square feet) and the area where the Bobcat is driven to access the construction site will be temporarily unusable by tiger beetles during construction activity. Therefore, tiger beetles will be directly affected by the temporary loss of more than 680 square feet of habitat. The death of larvae and adults and the temporary loss of habitat will result

in a decrease in the total number of tiger beetles immediately following project construction and in subsequent years. Because the removed sand will be replaced on top of the pipeline and the pipeline will be two feet below the surface of the beach, the proposed activity will not result in any permanent habitat loss.

Cumulative Effects - Cumulative effects include the effects of future State, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of Endangered Species Act.

The future activities that may affect the beetle are any shoreline stabilization activities. However, the majority of these types of activities will require a permit from the Corps and will be reviewed during future consultations.

CONCLUSION

After reviewing the current status of northeastern beach tiger beetle throughout its range and in the action area, the environmental baseline for the action area, the effects of the proposed pipe installation and the cumulative effects, it is the Service's biological opinion that the issuance of a DOA permit for this project, as proposed, is not likely to jeopardize the continued existence of the northeastern beach tiger beetle. No critical habitat has been designated for this species, therefore, none will be affected.

III. INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the Endangered Species Act, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be implemented by the Corps so that they become binding conditions of any permit issued to the applicant in order for the exemption in Section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of Section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The extent of incidental take of adult and larval northeastern beach tiger beetles anticipated from this project is difficult to quantify because the population density of the beetle within the project area has not been determined. Any beetles that are killed during clearing of vegetation, project construction, and stockpiling of equipment will be difficult to observe or locate due to their coloring and small body size. Additionally, larvae are typically located under the surface of the sand and are not likely to be seen. However, the level of take

of this species can be anticipated by the areal extent of the potential habitat affected. This incidental take statement anticipates the taking of northeastern beach tiger beetles from at least 680 square feet along the pipeline alignment resulting from construction activities, stockpiling of materials and equipment, and temporary loss of habitat.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take:

1. Human activity, materials, and equipment on the beach must be minimized to reduce the impact to tiger beetles.
2. Construction activities must be conducted during an appropriate time of year to minimize the impacts to tiger beetles.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of Section 9 of Endangered Species Act, the Corps and Bavon Beach Property Owners Association, c/o Frank Beveridge, must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

1. No construction of or earth-moving for the proposed project between June 1 and September 30 of any year.
2. No placement of materials or equipment on the beach between June 1 and September 30 of any year.
3. No use of vehicles or heavy equipment will occur on the beach outside the 5-foot wide, 136-foot long construction path except to bring the Bobcat to the construction site.
4. Ingress to and egress from the construction path will be as close to the dune line as possible.
5. No placement or stockpiling of materials will occur on the beach outside the 5-foot wide, 136-foot long construction path.
6. No ground disturbance will occur outside of the 5-foot wide, 136-foot long construction path.
7. The sand removed from the trench will be placed immediately adjacent to the trench and will be placed over the pipe immediately after it is in place.
8. No refueling of equipment will occur on the beach.

9. The applicant is required to notify the Service before initiation of construction and upon completion of the project at the address given below. All additional information to be sent to the Service should also be sent to the following address:

Virginia Field Office
U.S. Fish and Wildlife Service
P.O. Box 480
White Marsh, VA 23183
(804) 693-6694

10. Care must be taken in handling any dead specimens of the northeastern beach tiger beetle that are found in the project area to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. Upon locating a dead specimen, initial notification must be made to the following Service Law Enforcement office:

Division of Law Enforcement
U.S. Fish and Wildlife Service
P.O. Box 187
Yorktown, VA 23690
(804) 890-0003

Please note that the finding of dead specimens does not imply enforcement proceedings pursuant to the Endangered Species Act. The reporting of dead specimens is required to enable the Service to determine if incidental take is reached or exceeded and to ensure that the terms and conditions in this biological opinion are appropriate and effective.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. With implementation of these measures the Service believes that only larval beetles located within the 5-foot wide, 136-foot long construction path (680 square feet) will be incidentally taken. If, during the course of the action, this minimized level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Corps must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

IV. CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of Endangered Species Act directs Federal agencies to utilize their authorities to further the purposes of Endangered Species Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to further minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans and other recovery activities, or to develop information to benefit the species.

The Service recommends that the Corps ensure that the pipe is of adequate size and construction so that it will not need to be repaired or replaced in the foreseeable future. This will minimize the frequency of beach disturbance at this site and minimize impacts to the northeastern beach tiger beetle.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any of these conservation recommendations by the Corps.

V. REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in the Corps' request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Unless information in this biological opinion is protected by national security or contains confidential business information, the Service recommends that you forward a copy of to the Virginia Department of Agriculture and Consumer Services at the following address:

Plant Protection
Virginia Department of Agriculture & Consumer Services
P.O. Box 1163
Richmond, VA 23209

If this opinion is not provided by the Corps and does not contain national security or confidential business information, the Service will provide a copy to this State agency ten business days after the date of this opinion.

The Service appreciates this opportunity to work with the Corps in fulfilling our mutual responsibilities under the Endangered Species Act. Please contact Cindy Schulz of this office at (804) 693-6694 if you require additional information.

Sincerely,

Karen L. Mayne
Supervisor
Virginia Field Office

LITERATURE CITED

Buhlmann, K.A. and C.A. Pague. 1992. Natural heritage inventory of Cicindela dorsalis dorsalis (northeastern beach tiger beetle). Natural Heritage Technical Report #92-16. Department of Conservation and Recreation, Division of Natural Heritage. Richmond, VA. 41 pp.

Knisley, C.B. and J.M. Hill. 1989. Human impact on Cicindela d. dorsalis on Flag Ponds, Maryland. Final Report to U.S. Fish and Wildlife Service, Annapolis Field Office, Maryland.

Knisley, C.B. and J.M. Hill. 1990. Studies of two endangered tiger beetles, Cicindela dorsalis dorsalis and Cicindela puritana, in Maryland, 1989. Part I. Human impact and biological studies in Calvert County. Final Report to Maryland Natural Heritage Program, Annapolis, MD.

Knisley, C.B., J.I. Luebke, and D.R. Beatty. 1987. Natural history and population decline of the coastal tiger beetle, Cicindela dorsalis dorsalis Say (Coleoptera: Cicindelidae). Virginia Journal of Science 38: 293-303.

U.S. Fish and Wildlife Service. 1993. Northeastern beach tiger beetle (Cicindela dorsalis dorsalis Say) Recovery Plan/Agency Draft. Hadley, MA.

U.S. Fish and Wildlife Service. 1994. Northeastern beach tiger beetle (Cicindela dorsalis dorsalis Say) Recovery Plan. Hadley, MA.

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bcc: ARD, Region 5
(Attn: Section 7 Coordinator)
Supervisor, CBFO
Endangered Species Biologist, CBFO
Service, Law Enforcement, Yorktown
(Attn: Dan Hurt)
Service, Law Enforcement, Richmond
(Attn: Senior Resident Agent)

10 business days after the date of this letter, mail copies to:
____ VDGIF, Richmond
(Attn: Ray Fernald)
DNH, Richmond
(Attn: Tom Smith)
VDACS, Richmond
(Attn: John Tate)

